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09/848,503	05/04/2001	Myung-sik Yim	Q64255	7564

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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/848,503	YIM ET AL.	
	Examiner	Art Unit	
	Joseph G. Ustaris	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 October 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-12,14 and 15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-12,14 and 15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *04 May 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 31, 2007 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 2, 4, 5, 7-9, 12, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chimoto et al. (US005838383A) in view of Schindler et al. (US006516467B1) and Battini et al. (US006919792B1).

Regarding claim 1, Chimoto et al. (Chimoto) discloses a "multimedia device in a multimedia system" (See Fig. 1). The receiver has a "backplane" that has a bus and multiple module receptacles or "plurality of connectors", where each module receptacle uses a "predetermined signal standard" in order successfully communicate over the bus (See Fig. 1; column 7 lines 61-67 and column 10 lines 54-63). The receiver can accept

multiple modules or "extension boards", where a module is "electrically coupled to a first one of the connectors for transmitting an MPEG transport stream" (See Fig. 1, modules 303-306; column 8 lines 1-26), and where each module would have the necessary components or "independent module" to process the steam when the module is selected (See column 8 lines 55-67 and column 9 lines 21-34). The receiver also includes a "main board unit" that has a CPU, memory, controllers, and a back-end processor (See Fig. 1, 313, 314, 309, and 311). The "main board unit" is incorporated into the "backplane" and is connected to all the module receptacles or "electrically coupled to a second one of the connectors" (See Fig. 1) via the bus. The back-end processor of the "main board unit" processes the MPEG transport stream transmitted by the extension board into a predetermined signal form (See column 9 lines 51-62 and column 10 lines 23-34) and the CPU selects the appropriate module or "extension board" (See column 8 lines 55-67, column 9 lines 21-34, and column 9 line 63 – column 10 lines 8). Furthermore, each of the receptacles inherently have a "transmission signal line" in order to receive commands from the "main board" to the "extension board" (See column 7 lines 61-67 and column 8 lines 55-67), an "MPEG transport stream line" to transport the MPEG stream from modules 304-306 to module 307 and 308 (See Fig. 1), and an "analog audio/video signal line" in order to successfully receive analog signals into the system (See Fig. 1. 303; column 8 lines 1-25). The bus also serves as the "selection signal line" where it can transmit current parameters to the selected modules (See column 7 lines 61-67, column 8 lines 55-67, and column 9 lines 21-34). Furthermore, each of the "main board unit and the extension board electrically coupled

to the connectors" inherently have a "transmission signal line" in order to receive commands from the "main board" to the "extension board" (See column 7 lines 61-67 and column 8 lines 55-67) and "selection signal line" where it can transmit current parameters to the selected modules (See column 7 lines 61-67, column 8 lines 55-67, and column 9 lines 21-34). However, Chimoto does not disclose that each of the extension board have an MPEG transport stream line and an analog audio/video signal line and wherein if a command corresponding to menu items from the extension board is received, the main board unit displays the received menu items on a screen, and if a menu item displayed on the screen is selected in the main board, the extension Board executes a command corresponding to the selected menu item.

Schindler et al. (Schindler) discloses an upgradeable system. Schindler discloses that an expansion card includes an MPEG transport steam line (See Fig. 5, MPEG-2 Decoder) and an analog audio/video signal line (See Fig. 5, YUV to NTSC conversion) (See col. 11 lines 58 – col. 12 line 42). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the modules disclosed by Chimoto to include an MPEG transport stream line and an analog/video signal line, as taught by Schindler, in order to reduce the number of modules to buy thereby leaving more available receptacles.

Battini et al. (Battini) discloses a system for controlling various components in a system. Battini discloses that if a command corresponding to menu items (HTML pages) from the extension board (connectable device) is received (See col. 4 lines 45-53, when a device is connected to the bus, it automatically instructs data interchange protocol

with the control device), the main board unit (control device) displays the received menu items on a screen (See Fig. 1, 14 and D; column 3 line 60 – column 4 line 29 and column 6 lines 9-25), and if a menu item displayed on the screen is selected in the main board (e.g. change volume setting), the extension Board executes a command corresponding to the selected menu item (the command is sent to the device to execute the command of changing the volume) (See column 3 line 60 – column 4 line 29 and column 6 lines 9-25). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the system disclosed by Chimoto to process a command corresponding to menu items from the extension board if it is received, the main board unit displays the received menu items on a screen, and if a menu item displayed on the screen is selected in the main board, the extension Board executes a command corresponding to the selected menu item, as taught by Battini, in order to provide a more efficient means of controlling devices by using a well known and established language.

Claim 2 contains the limitations of claim 1 (wherein the "main board unit" and "backplane" form a "combination main board unit" as a single unit (See Chimoto Fig. 1)) and is analyzed as previously discussed with respect to that claim. Furthermore, the modules or "extension board" are attachable to any one of the receptacles and separately from the combination main board (See Chimoto column 10 lines 54-63).

Claim 4 contains the limitations of claims 1 or 2 and is analyzed as previously discussed with respect to those claims. Furthermore, Chimoto discloses a "MPEG transport stream decoder for decoding the MPEG transport stream into an MPEG video

bit stream and an audio bit stream" (See Fig. 1, module 305; column 8 lines 1-26), an "MPEG video decoder for decoding the MPEG video bit stream" (See Fig. 1, module 307), an "audio decoder for decoding the audio bit stream" (See Fig. 1, module 308), and a CPU or "control unit" for selecting one of the modules or "extension boards", operating the MPEG TS decoder, the audio decoder, and the MPEG video decoder, and selectively outputting a multimedia signal (See Fig. 1, CPU; column 7 lines 61-67, column 8 lines 55-67, and column 9 lines 21-34). However, Chimoto does not explicitly disclose that the MPEG video decoder and the audio decoder provide an analog video and audio signal.

Official Notice is taken that it is well known for MPEG video decoders and audio decoders to produce analog video and audio signals. Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the MPEG video decoder and audio decoder disclosed by Chimoto to be able to produce an analog video and audio signal in order to increase the capabilities of the system thereby making the system compatible with older system based on analog schemes.

Regarding claim 5, the modules or "extension boards" have a "module unit" for transmitting a transport stream to the "backplane", when the CPU selects that particular "extension board", in order to successfully deliver the stream to other modules within the receiver (See Chimoto Fig. 1; column 7 lines 61-67).

Regarding claim 7, the modules or "extension board" has a "module unit" as discussed in claim 5 above. Furthermore, the modules (See Chimoto Fig. 1, 303-306) or

"extension boards" have an "extended control unit" that will receive the commands from the CPU, execute the commands, and control the "module unit" to transmit the stream on to the bus of the receiver (See Chimoto Fig. 1; column 7 lines 61-67 and column 8 lines 1-26). The modules inherently have memory that stores a program that is executed by the module in order to successfully perform its functions (See Chimoto Fig. 1, modules 303-308).

Regarding claim 8, wherein the extended control unit transmits the menu items in a form of an HTML document to the main board, and if the menu item displayed is selected by the main board, the extended control unit executes the command corresponding to the selected menu item (See Battini column 3 line 60 – column 4 line 29 and column 6 lines 9-25, e.g. changing the volume setting as discussed in claim 1 above).

Regarding claim 9, inherently when the CPU does not select the module, the module does not transmit a transport stream on to the bus (See Chimoto column 7 lines 61-67, column 8 lines 55-67, and column 9 lines 21-34).

Claim 12 contains the limitations of claim 1 and is analyzed as previously discussed with respect to that claim.

Claim 14 contains the limitations of claims 1 and 7 (wherein the modules extends functions different from the functions on the main board (See Chimoto Fig. 1)) and is analyzed as previously discussed with respect to those claims. Furthermore, each of the module (See Chimoto Fig. 1, 303-306) have "module units" that drive a "function extension module" in order to successfully receive a signal and provide a transport

stream to the bus (See Chimoto Fig. 1; column 8 lines 1-26 and column 9 lines 34-50). Each module inherently has a "connector unit" that connects the "module unit" to the "extended control unit" in order for the module or "extension board" to operate correctly.

Claim 15 contains the limitations of claims 1, 8, and 14 and is analyzed as previously discussed with respect to those claims.

4. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chimoto et al. (US005838383A) in view of Schindler et al. (US006516467B1) and Battini et al. (US006919792B1) as applied to claims 1 and 2 above, and further in view of Trovato et al. (US006469742B1).

Chimoto in view of Schindler and Battini discloses that the modules or "extension boards" have a "module unit" for transmitting a transport stream to the "backplane", when the CPU selects that particular "extension board", in order to successfully deliver the stream to other modules within the receiver (See Chimoto Fig. 1; column 7 lines 61-67). However, Chimoto in view of Schindler and Battini does not disclose a memory storing a program to be executed by the main board.

Trovato et al. (Trovato) discloses electronic devices with adaptable upgrade capability. Trovato discloses that the modules include memory that stores device drivers and protocols that is used by the CPU to interface the module with the CPU or "memory storing a program to be executed by the main board" (See Fig. 1; column 4 lines 20-26). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the modules disclosed by Chimoto in view of Schindler

and Battini to have a memory that stores a program to be executed by the main board, as taught by Trovato, in order to make the upgrade process easier for the user thereby requiring less interaction from the user during the upgrade process.

5. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trovato et al. (US006469742B1) in view of Whetsel (US005497379A), Chimoto et al. (US005838383A), and Battini et al. (US006919792B1).

Trovato et al. (Trovato) discloses a "method for extending functions of a multimedia device having a backplane, a main board, and at least one extension board electrically coupled to the backplane" (See Fig. 1). The system is able to "determine whether the extension board is electrically coupled to one of the plurality of connectors of the backplane" (See Fig. 1; column 4 lines 29-61). If a module is connected, the system is able to "analyze characteristics of the extension board" (See column 4 lines 20-26), wherein the CPU reads and loads the device drivers and protocols in order to successfully interface with the CPU. The system would use the module to "perform functions according to the characteristics" and "display a signal corresponding to the function of the extension board" (See column 4 lines 6-61). For example, if the module is a video signal processing unit or a graphic processor, then the system will utilize the module's functions and display the video or graphics on the display or screen (See Fig. 1). However, Trovato does not explicitly disclose "sequentially scanning the connectors", the "main board unit selects the extension board to transmit the MPEG transport stream processed by an independent module of the extension board", and

wherein if a command corresponding to menu items from the extension board is received, the main board unit displays the received menu items on a screen, and if a menu item displayed on the screen is selected in the main board, the extension Board executes a command corresponding to the selected menu item.

Whetsel discloses a system that is able to perform tests on various circuits, e.g. bus circuits. Whetsel discloses that one of the test operations executes a sequence of connection scans to detect the presence of add on boards or "sequentially scanning the connectors" (See column 14 line 59 – column 15 line 15). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the system disclosed by Trovato to also sequentially scan the connectors, as taught by Whetsel, in order to verify if the modules are still active and present over a period of time (See column 14 lines 59-61).

Chimoto et al. (Chimoto) discloses an upgradeable receiver. Chimoto discloses that the main board unit selects the extension board (See column 8 lines 55-67 and column 9 lines 21-34) to transmit the MPEG transport stream processed by an independent module of the extension board (See Fig. 1, modules 307 and 308; column 8 lines 1-26). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the system disclosed by Trovato to have the main board unit select the extension board to transmit the MPEG transport stream processed by an independent module of the extension board, as taught by Chimoto, in order to provide a system that can be easily upgraded to various decoding schemes such as MPEG.

Battini et al. (Battini) discloses a system for controlling various components in a system. Battini discloses that if a command corresponding to menu items (HTML pages) from the extension board (connectable device) is received (See col. 4 lines 45-53, when a device is connected to the bus, it automatically instructs data interchange protocol with the control device), the main board unit (control device) displays the received menu items on a screen (See Fig. 1, 14 and D; column 3 line 60 – column 4 line 29 and column 6 lines 9-25), and if a menu item displayed on the screen is selected in the main board (e.g. change volume setting), the extension Board executes a command corresponding to the selected menu item (the command is sent to the device to execute the command of changing the volume) (See column 3 line 60 – column 4 line 29 and column 6 lines 9-25). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the system disclosed by Trovato to process a command corresponding to menu items from the extension board if it is received, the main board unit displays the received menu items on a screen, and if a menu item displayed on the screen is selected in the main board, the extension Board executes a command corresponding to the selected menu item, as taught by Battini, in order to provide a more efficient means of controlling devices by using a well known and established language.

Regarding claim 11, Battini discloses that a device sends a set of HTML pages to a control unit that is used to control the device. The control unit, which serves as a "web browser", displays the HTML pages. The HTML pages can display various information and control parameters or "menu items" (See column 3 line 60 – column 4 line 29). The

user can use the HTML web pages to issue commands (e.g. change volume setting) and the command is sent to the device to execute the command (See column 3 line 60 – column 4 line 29 and column 6 lines 9-25).

Response to Arguments

6. Applicant's arguments filed October 31, 2007 have been fully considered but they are not persuasive.

Applicant argues with respect to claims 1, 2, 4-9, 12, 14, and 15 that Chimoto does not disclose an extension board for transmitting an MPEG transport stream processed by an independent module of the extension board with the extension board is selected. However, reading the claims in the broadest sense, Chimoto does meet this limitation in the claims. Chimoto discloses modules 303-306 receives and processes MPEG transport streams from external digital signals and transmits the MPEG transport stream via bus 302 to the MPEG decoding modules 307 and 308 (See Fig. 1; col. 8 lines 1-26).

Furthermore, applicant argues that Schindler does not disclose transmitting an MPEG transport stream processed by an independent module of the extension board. However, this limitation has been met by Chimoto as discussed above.

Applicant also argues that Schindler teaches away from the extension board. However, Schindler also discloses multiple modules that plug into a backplane, much like Chimoto. For example, Schindler discloses a video module that handles both digital and analog videos (See Fig. 5). Schindler further discloses two sound modules, a

modem module, and a receiver module (See Fig. 3). Schindler discloses that the module includes an MPEG transport stream line and an analog audio/video signal line (See Fig. 5). Therefore, Schindler meets the limitations of an MPEG transport stream line for an MPEG transport stream and an analog audio/video signal line for an analog audio/video signal.

Applicant further argues with respect to claims 1, 2, 4-9, 12, 14, and 15 that Chimoto and Schindler does not disclose wherein if a command corresponding to menu items from the extension board is received, the main board unit displays the received menu items on a screen, and if a menu item displayed on the screen is selected in the main board, the extension Board executes a command corresponding to the selected menu item. However, reading the claims in the broadest sense, in it found that Battini meets those limitations in the claims. Battini discloses that if a command corresponding to menu items (HTML pages) from the extension board (connectable device) is received (See col. 4 lines 45-53, when a device is connected to the bus, it automatically instructs data interchange protocol with the control device), the main board unit (control device) displays the received menu items on a screen (See Fig. 1, 14 and D; column 3 line 60 – column 4 line 29 and column 6 lines 9-25), and if a menu item displayed on the screen is selected in the main board (e.g. change volume setting), the extension Board executes a command corresponding to the selected menu item (the command is sent to the device to execute the command of changing the volume) (See column 3 line 60 – column 4 line 29 and column 6 lines 9-25).

Applicant also argues with respect to claims 10 and 11 that Trovato does not disclose displaying a signal corresponding to the function of the extension board that was performed according to the characteristics of the extension board that was analyzed. However, reading the claims in the broadest sense, Trovato does meet that limitation in the claims. Trovato discloses that when a module (extension board) is connected the system analyzes the characteristics of the module (See col. 4 lines 20-26, the CPU reads and loads the device drivers and protocols in order to successfully interface the module with the CPU). The system would then use the module (e.g. a video signal processing unit or a graphic processor) (See col. 4 lines 7-12) according to the characteristics previously analyzed (device drivers and protocols) to display a signal that was processed by the video signal processor or a graphic processor on the digital television (See Fig. 1 col. 4 lines 6-61).

Applicant further argues with respect to claims 10 and 11 that Trovato, Whetsel, and Chimoto does not disclose wherein if a command corresponding to menu items from the extension board is received, the main board unit displays the received menu items on a screen, and if a menu item displayed on the screen is selected in the main board, the extension Board executes a command corresponding to the selected menu item. However, reading the claims in the broadest sense, in it found that Battini meets those limitations in the claims. Battini discloses that if a command corresponding to menu items (HTML pages) from the extension board (connectable device) is received (See col. 4 lines 45-53, when a device is connected to the bus, it automatically instructs data interchange protocol with the control device), the main board unit (control device)

displays the received menu items on a screen (See Fig. 1, 14 and D; column 3 line 60 – column 4 line 29 and column 6 lines 9-25), and if a menu item displayed on the screen is selected in the main board (e.g. change volume setting), the extension Board executes a command corresponding to the selected menu item (the command is sent to the device to execute the command of changing the volume) (See column 3 line 60 – column 4 line 29 and column 6 lines 9-25).

Applicant is reminded that although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph G. Ustaris whose telephone number is 571-272-7383. The examiner can normally be reached on M-F 7:30-5 PM; Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher S. Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JGU
January 8, 2008